BUGAY, A.A.; RUBAN, M.A.

Spectrometer for studying electron paramagnetic resonance in solids at low temperatures. Zav.lab. 29 no.11:1376-1379 '63. (MIRA 16:12)

1. Institut poluprovodnikov AN UkrSSR.

L 12025-66 EWT(1) IJP(e) WW/GG

ACC NR: AT5028000 SOURCE CODE: UR/0386/65/000/001/0344/0346

AUTHOR: Bugay, A. A.; Levkovskiy, P. T.; Maksimenko, V. M.; Pashkovskiy, M. V.; Roytsin, A. B.

ORG: Institute of Semiconductors Academy of Sciences, Ukrainian SSR (Institut poluprovodnikov Akademii nauk Ukrainskoy SSR)

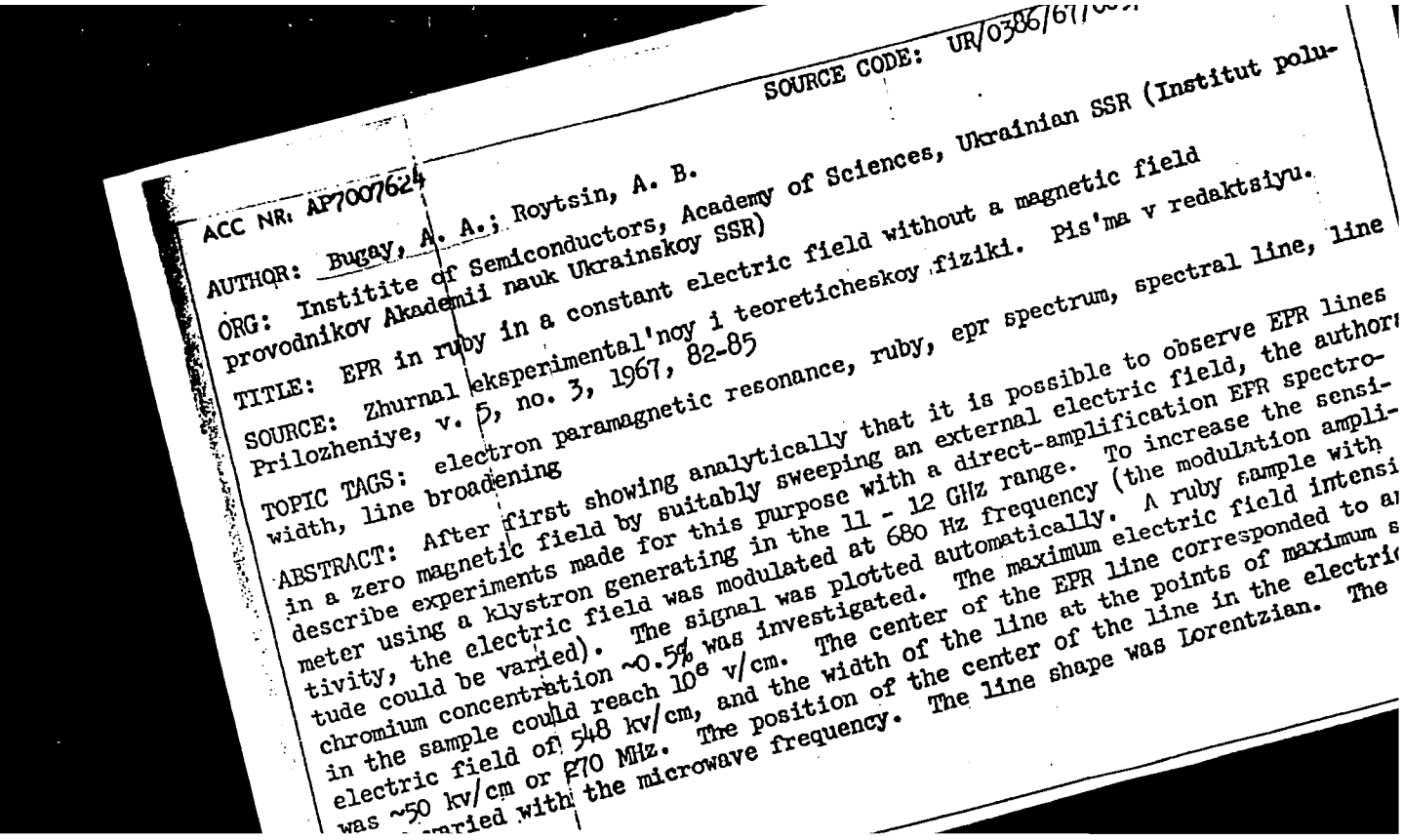
TITLE: Splitting of EPR lines of Cr^{3+} in $ZnWO_4$ by an external electric field

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. (Prilozhenlye), v. 2, no. 1, 1965, 344-346

TOPIC TAGS: zinc compound, EPR spectrum, line splitting

ABSTRACT: The authors have observed the splitting of two Cr^{3+} EPR lines corresponding to transitions between the sublevels of the Kramers doublets occurring when an external static electric field E is applied to a $ZnWO_4$ crystal, in which are two non-equivalent positions of the Zn^{2+} ion replaced by the Cr^{3+} ion. These positions differ in inversion with respect to the position occupied by the zinc ion, so that the shift of the EPR line should manifest itself in the form of its splitting. The dependence of the line splitting on the orientation of an external static magnetic field H was also investigated. The experiments were made with an EPR spectrometer operating at 9380 Mc and at room temperature. The angular dependence of the line splitting, corresponding to the transition between the sublevels of the lower Kramers doublet (Fig. 1), is presented for the case when the field E is directed along the crystallographic

Card 1/2



SOURCE CODE: UR/0386/67/

ACC NR: AP7007624

AUTHOR: Bugay, A. A.; Roytsin, A. B.

ORG: Institite of Semiconductors, Academy of Sciences, Ukrainian SSR (Institut poluprovodnikov Akademii nauk Ukrainskoy SSR)

TITLE: EPR in ruby in a constant electric field without a magnetic field

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 5, no. 3, 1967, 82-85

TOPIC TAGS: electron paramagnetic resonance, ruby, epr spectrum, spectral line, line width, line broadening

ABSTRACT: After first showing analytically that it is possible to observe EPR lines in a zero magnetic field by suitably sweeping an external electric field, the authors describe experiments made for this purpose with a direct-amplification EPR spectrometer using a klystron generating in the 11 - 12 GHz range. To increase the sensitivity, the electric field was modulated at 680 Hz frequency (the modulation amplitude could be varied). The signal was plotted automatically. A ruby sample with chromium concentration ~0.5% was investigated. The maximum electric field intensi in the sample could reach 10^6 v/cm. The center of the EPR line corresponded to a electric field of 548 kv/cm, and the width of the line at the points of maximum s was ~50 kv/cm or 870 MHz. The position of the center of the line in the electri varied with the microwave frequency. The line shape was Lorentzian. The

ACC NR: AP7007624

width was higher than obtained from an analysis of the causes of the broadening of ordinary EPR lines in ruby, the difference being due to the use of samples with high concentration and very uneven distribution of the chromium ions. The authors thank M. F. Deygen for a discussion of the results and P. T. Levkovskiy, V. M. Maksimenko, and L. I. Bereshinskiy for technical help. Orig. art. has: 1 figure and 2 formulas.

SUB CODE: 20/ SUBM DATE: 28Oct66/ OTH REF: 003

BUGAY, A.S., inzh.

Ultrasonic control of woodpulp production. Bum. prom. no.3: 20-21 Mr '64. (MIRA 17:3)

BUGAY, Arkadiy Sil'vestrovich [Buhai, A.S.]; KIRO, S.M., red.; SHMANDIN, Yu.M., red.; KOPERSAK, G.D.[Kopersak, H.D.], red.

[Concise explanatory mathematical dictionary] Korotkii tlumachnyi matematychnyi slovnyk. Kyiv, Radians'ka shkola, 1964. 427 p. (MIRA 17:8)

BUGAY, A.S.

Ways of the application of ultrasonic waves in the hydro[illegible]
and sulfite alcohol industry. Gidroliz. i lesokhim.prom. [illegible]
no.1:16-17 '65. (MRA 18:3)

1. Sibirskiy tekhnologicheskiy institut.

KOVAL', S.I.; BUGAY, F.D.

Over-all mechanization of labor-consuming operations on a 10,000 ton capacity press. Sbor.Novo-Kram.mashinostroi.zav. no.5:15-22 '59.

(MIRA 16:12)

BUGAY I. G.

USSR/Foundry Practice Apr 1947
Turbines

"Particulars of the Technique of Casting the Rotor Wheel and Stator of the 'Francis' Hydroturbine for the Dnepr Hydroelectric Station," I. G. Bugay, M. M. Novgorodskiy, 5 pp

"Vestnik Mashino" Vol XXVII, No 4

Fully illustrated with diagrams and photographs.

10T76

BUGAY, I. G.

USSR/Metals - Steel, Casting Oct 51

"Casting Parts of the Low-Pressure Cylinder for a Steam Turbine," I. G. Bugay, Eng V. G. Gruzin, Cand Tech Sci, N. G. Novikov, A. F. Netyazhenko, V. N. Saveyko, Engineers TsNILTMASh

"Litey Proizvod" No 10, pp 2-6

Low-pressure cylinder is composed of sep cast parts, casing of which represents long, complex and labor-consuming process. Some of these parts weigh up to 8,340 kg and require 12,540 kg of liquid metal. Describes technological process of manufg upper right and lower left parts of casting.

198T63

BUGAY, K.S.

Materials on the biology and commercial fishing of pike perch in the Dnieper estuary. Trudy Inst.gidrobiol.AN URSR no.27:105-134 '52. (MLRA 9:8)

(Dnieper River--Perch)

BUGAY, K.S.

Reproduction of Pelecus cultratus L. in connection with the regulation of the lower course of the Dnieper River [with summary in English]. Zool. zhur. 37 no.7:1063-1075 Jl '58. (MIRA 11:8)

1. Institut gidrobiologii AN USSR, Kiyev.
(Dnieper River--Carp)

BUGAY, N.S., Cand Biol Sci — (diss) " The Propr[illegible] (biometry, [illegible] biology, industry)." Kiev, 1959. 16 pp (Min of Higher Education USSR, Dnepropetrovsk State U im 300th Anniversary of the Unification of the Ukraine and Russia). 150 copies (KL, 38-59, 119)

BUGAY, Klim Semenovich [Buhai, K.S.]; VLADIMIROV, V.I., doktor biolog. nauk, otv.red.; BRAGINSKIY, L.P. [Brahins'kyi, L.P.] red.izd-va; YEFIMOVA, M.I. [IEfimova, M.I.], tekhn.red.

[Pelecus cultratus L. of the Dnieper River; biometry, biology, fisheries] Dniprova'ka chekhonia; biometryka, biologiia, promysel. Kyiv, Vyd-vo Akad.nauk URSR, 1959. 127 p. (MIRA 12:8)
(Dnieper River--Carp)

BUGAY, K.S.

Conditions for the reproduction of semimigratory phytophilous fishes in the lower part of the Dnieper River after its regulation by the Kakhovka Dam. Vop. ekol. 5:17-19 '62. (MIRA 16:6)

1. Institut gidrobiologii AN UkrSSR, Kiyev.
(Dnieper River--Fishes)

VLADIMIROV, Vladimir Ivanovich; SUKHOYVAN, Pavel Grigor'yevich; BUGAY, Klim Semenovich; NEMCHENKO, Ye.M., red.izd-va; MATVIYCHUK, A.A., tekhn. red.

[Reproduction of fishes in regulated rivers as exemplified by the Dnieper River] Razmnozhenie ryb v usloviiakh zaregulirovannogo stoka reki (na primere Dnepra). Kiev, Izd-vo AN USSR, 1963. 393 p. (MIRA 16:8)
(Dnieper River—Fisheries)

BUGAY, M.A.

1. SHVAYUN, V.L. Eng. BUGAY, M.A. ENG.

2. USSR (600)

3. Machinery-Design

4. Experience with unification of designing at a plant of an individual manufacturing enterprise.
Vest. mash., No. 7-1952.

9. Monthly List of Russian Acessions, Library of Congress, February, 1953. Unclassified.

BUGAY, M.A., inzh.

Shortening the operating cycle in manufacturing machines. (MIRA 13:6)
Vest.mash. 40 no.3:73-77 Mr '60.
(Industrial management)

BUGAY, M.A., inzh.

"Fundamentals of efficient machinery design" by S.A.Kartavov. Reviewed by M.A.Bugai. Vest. mashinostr. 44 no. 4:88 Ap '64. (MIRA 17:5)

BELYASHEVSKIY, N.N. [Biliashevs'kyi, M.M.]; PIVOVAR, M.G. [Pyvovar, M.H.]; BUGAY, M.G. [Buhai, M.H.]

Study of the contact stability of inverted filters under drained concrete linings subject to pressure fluctuations. Visti Inst. hidrol. i hidr. AN URSR 21:43-55 '62. (MIRA 16:4)
(Dams)

S/057/60/030/04/09/009
B004/B002

AUTHORS: Shestopalov, V. P., Yatsuk, K. P., Bugay, N. D.

TITLE: Consideration of the Periodic Properties of a Spiral in Measuring the Dielectric Constant in Substances by Means of the Spiral Waveguide Method

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 4, pp. 460-463

TEXT: The authors investigated the system consisting of a spiral and a dielectric, which completely fills the interior of the spiral, and which has the dielectric constant ε. Parameter a (radius of the spiral), ψ (angle of the winding), d (pitch of the spiral), 2b (bandwidth of the winding) were used for the calculation. First, the dispersion equations of a wide-band spiral are derived. Fig. 1 shows the dispersion curves drawn by means of them when porcelain is used as dielectric. The dispersion properties are little affected by 2b and d. Furthermore, the equations for spirals with narrow bands are derived. The experimental checking was conducted by means of an apparatus described in Refs. 1 and 2.

1/B

Card 1/2

Consideration of the Periodic Properties of a Spiral in Measuring the Dielectric Constant in Substances by Means of the Spiral Waveguide Method

S/057/60/030/04/09/009
B004/B002

The substances investigated were: viniplast, porcelain, and ebonite. Data are given in Table 1. The results of measurements with and without taking periodicity into account, are shown in Table 2. With narrow-band windings, the action of 2b and d upon the dispersion properties is slightly stronger. There are 1 figure, 2 tables, and 4 Soviet references.

ASSOCIATION: Khar'kovskiy gosuniversitet im. A. M. Gor'kogo
(Khar'kov State University imeni A. M. Gor'kiy)

SUBMITTED: July 2, 1959

/B

Card 2/2

BUGAY, N.G. (Irkutsk, U.S.S.R.)

"Contact washout of two adjacent permeable [illegible] coarse-grained texture by a longitudinal stream." Pop. Mekh. Nr.11: 1451-1454 '63.

1. Institut gidrologii i gidrotekhniki AN [illegible].

LEPIN, G.F.; BUZUNOV, V.N.; TSEYTLIN, M.A.; BUGAY, N.V.

Increase in the operational reliability of the fastening devices of electric power systems operating under high pressures. Energ. i elektrotekh. prom. no.2:59-64 Ap-Je '62. (MIRA 15:6)

1. Krivorozhskiy vecherniy industrial'nyy institut (for Lepin, Buzunov). 2. Glavnoye upravleniye energeticheskogo khozyaystva Donetskogo basseyna (for TSeytlin, Bugay).

(Steam power plants)

BELYY, V.G.; BUGAY, N.V.; IVANOV, V.V.; SHELUD'KO, V.M.

Study of fractures in the drum of a high-pressure boiler and of methods for preventing them from originating. Energ.i elektrotekh.prom. no.4:55-59 O-D '62. (MIRA 16:2)

1. Glavnoye upravleniye energeticheskogo khozyaystva Donetskogo basseyna.

(Boilers)

BUGAY, N.V.

Increase in the wear resistance of casts from high-manganese steel. Energ. i elektrotekh. prom. no.1:50-52 Ja-Mr '63. (MIRA 16:5)

1. Glavnoye upravleniye energeticheskogo khozyaystva Donetskogo basseyna.

(Steel)

ANTONENKO, V.S.; BUGAY, N.V.; TSEYTLIN, M.A.

Operational reliability of 200 Mw. blocks. Energ. i elektrotekh. prom. no.2:59-61 Ap-Je '63. (MIRA 16:7)

1. Glavnoye upravleniye energeticheskogo khozyaystva Donetskogo basseyna.
(Electric power plants) (Steampipes)

BUGAY, N.V.; IVANOV, V.V.

Determination of the dependence of shock ductility on the structure of chromium-molybdenum-vanadium steel. Energ. i elektrotekh. prom. no.2:64-66 Ap-Je '63. (MIRA 16:7)

1. Glavnoye upravleniye energeticheskogo khozyaystva Donetskogo baseyna.

(Steel alloys)

BUGAY, N.V.; IVANOV, V.V.

Development of defects in the metal of thermal power equipment during its operation. Energ. i elektrotekh. prom. no.1:48-50 Ja-Mr'64. (MIRA 17:5)

BUGAY, N.V., inzh.

Breakdown of austenitic steel superheater pipes in the TP-100 boilers of the Donets Basin Electric Power System. Energ. i elektrotekh. prom. no.2:37-39 Ap-Je '64. (MIRA 17:10)

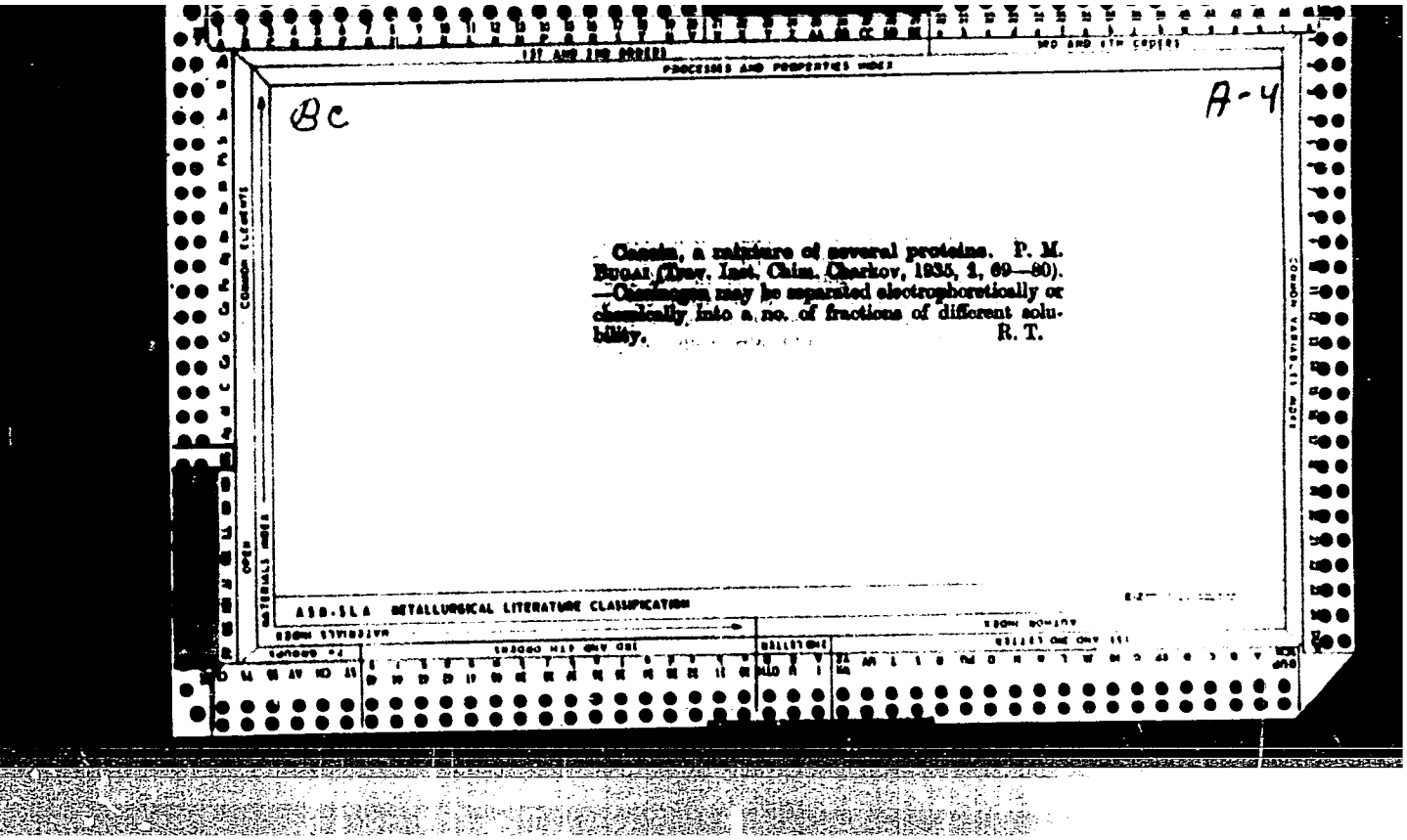
BUGAY, N.V., inzh., LEVITSKAYA, L.A., inzh.

Damage of steampipes due to heat fatigue of the metal. Energ. i elektrotekh. prom. no.1:50-51 Ja-Mr '65. (MIRA 18:5)

BUGAY, N.V., inzh.; MESHKOV, L.I., inzh.

Wear-resistant components from tellurous cast iron. Energ. i elektrotekh. prom. no.4:61-62 O-D '65.

(MIRA 19:1)



Bc

A-4

Casein, a mixture of several proteins. P. M. Bugai (Trav. Inst. Chim. Charkov, 1935, 2, 69—80). —Casein may be separated electrophoretically or chemically into a no. of fractions of different solubility. R. T.

[redacted]

[redacted], I. N.

[redacted] Al'fa-Lantolevyye Trekhkomponentnyye Smoly. Avtor. Svidet. Khim.-Tekhnol. In-ta im. Kirova, Vyp. 7, 1949, s. 149-[redacted]

SO: LSTOPIS' No. 31, 1949

BUGAY, P.M.

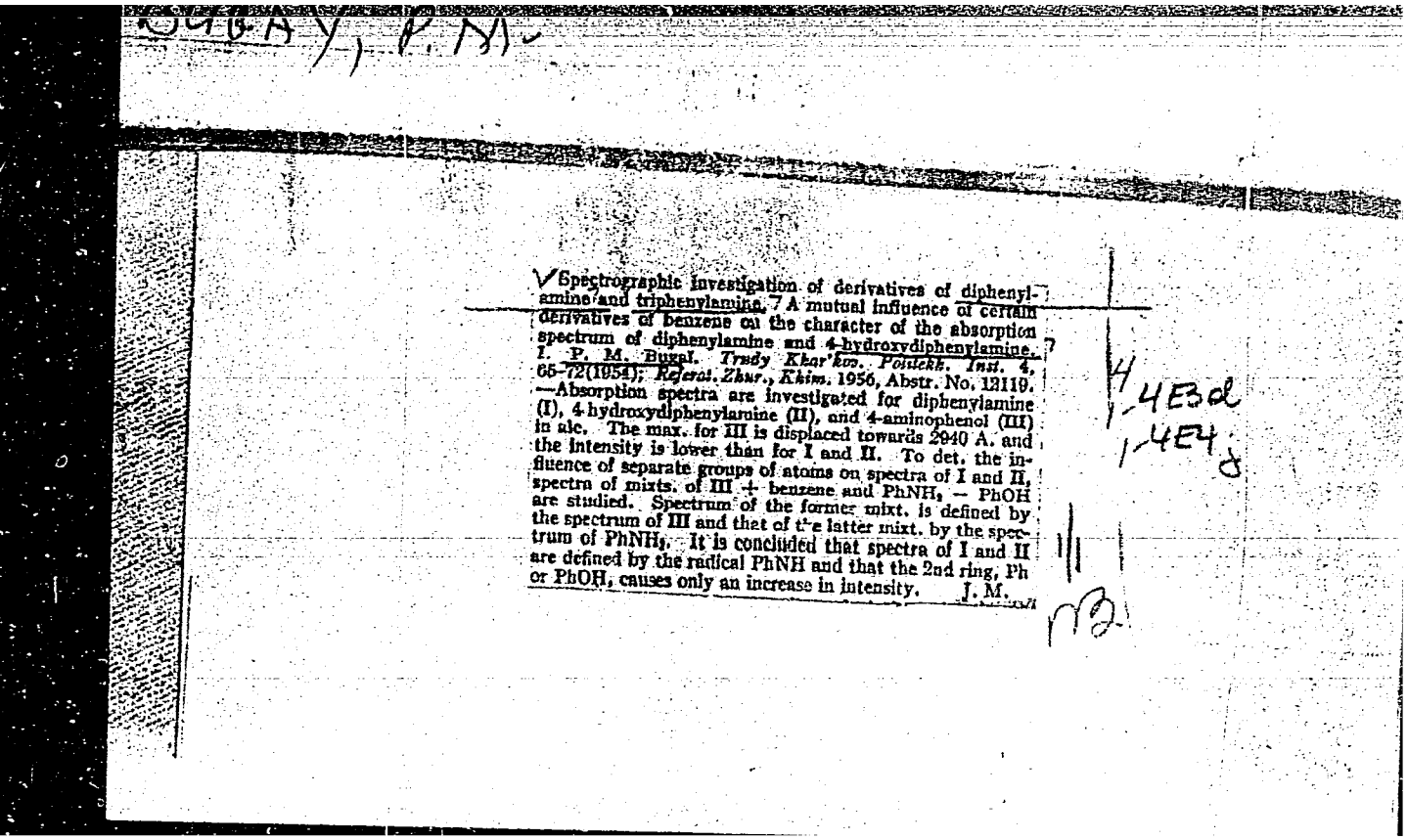
BUGAY, P. M.

(2)

Preparation of p-nitrotriphenylamines. P. M. Bugai (V. I. Lenin Polytech. Inst., Kharkov). *Zhur. Obshchei Khim.* 23, 605–6(1953); cf. Haeussermann and Bauer, *Ber.* 31, 2987(1898); Gumbarjan, *C.A.* 3, 181, and Piccard and Larsen, *C.A.* 11, 2775.—When 2 g. Ph_3N is added to 24 g. AcOH only a part of it dissolves so that addn. of 4 g. nitration mixt. (6 parts fuming HNO_3 and 10 parts AcOH) produces di- and trinitro derivs. only, since the insol. part of Ph_3N has no opportunity to react. If, immediately after addn. of the nitration mixt., the ppt. of residual Ph_3N is removed, dissolved again in 24 g. AcOH, 2 g. nitration mixt. added, and the whole heated at 45–50°, the 1st part of Ph_3N gives mixed di- and trinitro derivs., while the 2nd part give almost pure mononitro deriv. p-$O_2NC_6H_4NPh_2$ is sol. in hot 50% AcOH and seps. on cooling. The 4,4'-dinitro deriv. is sol. in hot 80% AcOH while the $(p\text{-}O_2NC_6H_4)_3N$ deriv. is insol. even in hot 100% AcOH. This affords a good sepn. The following m.ps. and % yields were obtained by the above method: p-$O_2NC_6H_4NPh_2$, 138–9°, 20–5; $(p\text{-}O_2NC_6H_4)_2NPh$, 206–7°, 30; $(p\text{-}O_2NC_6H_4)_3N$, 279–80°, 40.

G. M. Kosolapoff

NA



Spectrographic investigation of derivatives of diphenylamine and triphenylamine. 7 A mutual influence of certain derivatives of benzene on the character of the absorption spectrum of diphenylamine and 4-hydroxydiphenylamine. I. P. M. Buzgl. *Trudy Khar'kov. Politekh. Inst.* 4, 65-72(1954); *Referat. Zhur., Khim.* 1956, Abstr. No. 12119. —Absorption spectra are investigated for diphenylamine (I), 4-hydroxydiphenylamine (II), and 4-aminophenol (III) in alc. The max. for III is displaced towards 2940 A. and the intensity is lower than for I and II. To det. the influence of separate groups of atoms on spectra of I and II, spectra of mixts. of III + benzene and $PhNH_2$ — PhOH are studied. Spectrum of the former mixt. is defined by the spectrum of III and that of the latter mixt. by the spectrum of $PhNH_2$. It is concluded that spectra of I and II are defined by the radical PhNH and that the 2nd ring, Ph or PhOH, causes only an increase in intensity. J. M.

BUGAY, P.M.

USSR/Physics - Absorption spectra

Card 1/1 Pub. 43 - 32/62

Authors : Bugay, P. M., and Konel'skaya, V. N.

Title : Ultraviolet and visible absorption spectra of certain nitro derivatives of diphenylamine

Periodical : Izv. AN SSSR. Ser. fiz. 18/6, 695-697, Nov-Dec 1954

Abstract : A spectral analysis of certain nitro-derivatives of diphenylamine showed that the nitro-group, being an auzochrome, affects the nature of the curve of the absorption spectrum. It was established that the reaction between a bimolar sodium alcoholate solution with diphenylamine nitro-derivatives results in the formation of quinoid molecules which in turn produce ionic, deeply-colored salts. Concentrated sulfuric acid combined with nitro-derivatives of diphenylamine form the ion-azenium type. Data regarding absorption spectra of diphenylamine nitro-derivatives are tabulated. Four references: 1 USSR, 1 USA, 1 French and 1 German (1907-1951). Table; graphs.

Institution: The V. I. Lenin Polytechnicum, Kharkov

Submitted : .....

Bugay, P. M.

USSR/Physical Chemistry - Molecules. Chemical Bonds. B-4

Abs Jour: Ref Zhur-Khimiya, No 5, 1957, 14379

Author : P. M. Bugay
Inst : Kharkov Polytechnical Institute
Title : Absorption spectra of n-nitro derivatives of diphenylamine

Orig Pub: Tr. Kharkovsk. polytekhn, in-ta, 1956, 8, 67-76

Abstract: A study was made of the diphenylamine absorption spectra and its 4 nitro- (I) and 4.4'-dinitro derivatives (II) in alcohol, diethyl chloride, mixture of alcohol + C_2H_5ONa and concentrated H_2SO_4. λ(max), lgε and curves of absorption spectra are presented. It is assumed that C_2H_5ONa causes in I and II a formation of quinoid structure and of ionic type salts, which explains the appearance of a deep, intensive color. H_2SO_4 first acts as an oxidizer, and then forms ionic -azine type compounds with the participation of the N-amino group, which also causes deepening of the color.

Card 1/1

Bugay, P.M.

B-4

USSR/ Physical Chemistry - Molecule. Chemical Bond

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7184

Author : Bugay, P.M.
Title : Absorption Spectra of Triphenylamine and of Its n-Nitro Derivatives in Pure Ethanol and in the Presence of Alcoholate. I

Orig Pub : Zh. obshch. khimii, 1956, Vol 26, No 6, 1729-1733

Abstract : The absorption spectra (AS) of triphenylamine (I) and its derivatives 4-nitro-I (II), 4,4-dinitro-I (III), and 4,4', 4"-trinitro-I (IV) in alcohol and in a solution containing C_2H_5- ONa (RZhKhim, 1953, 4566) in the UV and visible regions have been investigated. The values of λ_{max} and log ε_{max} are given. It was found that the AS of I was not affected when C_2H_5ONa solution was used as a solvent instead of alcohol; the AS of II-IV, on the other hand, were considerably changed and the color of the solutions was darkened. A similarity was found

- 17 -

Card 1/2

Khar'kovskiy politekhnicheskiy institut.

Category: USSR / Physical Chemistry - Molecule. Chemical bond. E-4

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29572

Author : Bugay P. M.
Inst : not given
Title : Ultraviolet and Visible Absorption Spectra of Triphenylamine and Its p-Nitro Derivatives in Concentrated Sulfuric Acid. II.

Orig Pub: Zh. obshch. khimii, 1956, 26, No 9, 2648-2651.

Abstract: On studying the absorption spectra of triphenylamine and of its 4-nitro-, 4,4'-dinitro- and 4,4',4"-trinitro-derivatives, in concentrated sulfuric acid, it was found that development of a coloration under the above stated conditions, apparently, is due to oxidation of triphenylamine and the formation of salts of the ammonium type. Deepening of the coloration of the derivatives is caused, apparently by analogous changes. Curves of absorption spectra are included. Communication I see RZhKhim, 1957, 7184.

Card : 1/1

BUGAY, P.M.

PRIKHOT'KO, A.F.

24(7) p 3 PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Lazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Lambsters, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Milyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Bugay, P.M.

USSR/Physical Chemistry - Molecule, Chemical Bond. B-4

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3528.

Author : P.M. Bugay.
Inst :
Title : Spectro-Photometric Study of Diphenylamine and Its Derivatives in Concentrated Sulfuric Acid.

Orig Pub: Zh. obshch. khimii, 1957, 27, No 6, 1632-1641.

Abstract: The oxidation of diphenylamine (I), 4-oxy-I (II) and 4-metoxy-I (III) during a long lasting action of sulfuric acid (IV) was studied. An absorption band at 254-285 mμ was revealed in the spectra of the compounds under study at the moment of dissolution. If the solutions had aged in a cool place, or if they had been heated in order to accelerate the reaction, new bands (of longer wave lengths) appeared and their intensity rose several tens of times together with the time. After I and IV had aged 265 days, a curve with a maximum at 590 mμ and a minimum at 464 mμ was

Card : 1/2 -14-

Kharkovskiy politekhnicheskiy institut

AUTHOR: Bugay, P. M.

79-12-13/43

TITLE: Spectrophotometric Investigation of Diphenylamine and its Derivatives in Concentrated Sulphuric Acid
(Spektrofotometricheskoye issledovaniye difenilamina i yego proizvodnykh v kontsentrirovannoy sernoy kislote).
II. Absorption Spectra of the - - Oxy - and - - Metoxyderivatives of Diphenylamine Substituted Twice
(Spektry pogloshcheniya dvuzameshchennykh - - oksi - i - - metoksiproizvodnykh difenilamina).

PERIODICAL: Zhurnal Obshchey Khimii 1957, Vol. 27, Nr 12, pp. 3226-3234 (USSR)

ABSTRACT: 4,4' - dioxy-diphenylamine was synthesized according to the described method and purified until its spectrographic purity. 4 - oxy - 4' - metoxydiphenylamine was produced in similar manner and 4,4' - dimetoxydiphenylamine was produced by methylization of 4,4' - dioxydiphenylamine with dimethylsulphate. The absorption spectra of 4,4' - dioxydiphenylamine, of 4 - oxy - 4' - metoxydiphenylamine and 4,4' - dimetoxydiphenylamine were recorded at different periods of time while staying in strong sulphuric solution (see figures and tables!). 4 - oxy - 4' - metoxydiphenylamine and

Card 1/3

Spectrophotometric Investigation of Diphenylamine and its Derivatives in Concentrated Sulphuric Acid. 79-12-13/43
II. Absorption Spectra of the [illegible] - Oxy - and [illegible] - Metoxyderivatives of Diphenylamine Substituted Twice.

4,4' dimetoxydiphenylamine form colourless solutions at the beginning of their dissolution in concentrated sulphuric acid, while the colour of 4,4' - dioxydiphenylamine solution becomes more intensive. After 10-45 days the sulphuric solutions of all products are of blue or green colour and the curves of their absorption spectra show the process of the connection with sulphuric acid in dependence on the time staying in the solution. On the basis of the comparison of the observations made by the authors with the data of literature it must be presumed that all compounds investigated form ions of the azene type (azeniyevogo tipa) on the occasion of oxydation in concentrated sulphuric acid. Only then, other oxydation and condensation reactions with the formation of coloured products of hydrazine derivatives may occur. The data mentioned indicate at the same character of the chemical interaction of the compounds investigated with concentrated sulphuric acid. There are 3 figures, 3 tables, and 6 references, 3 of which are Slavic.

Card 2/3

Spectrophotometric Investigation of Diphenylamine and its Derivatives in Concentrated Sulphuric Acid. II. Absorption Spectra of the [redacted] - Oxy - and [redacted] - Metoxyderivatives of Diphenylamine Substituted Twice. 79-12-13/43

ASSOCIATION: Khar'kov Polytechnical Institute (Khar'kovskiy politekhnicheskiy institut).

SUBMITTED: June 18, 1956

AVAILABLE: Library of Congress

1. Nitrodiphenylamines - Spectra 2. Spectrophotometers - Applications 3. Nitrodiphenylamines - Chemical analysis

Card 3/3

AUTHOR: Bugay, P. M.

79-12-14/43

TITLE: Spectrophotometric Investigation of Diphenylamine and its Derivatives in Concentrated Sulphuric Acid
(Spektrofotometricheskoye issledovaniye difenilamina i yego proizvodnykh v kontsentrirovannoy sernoy kislote).
III. Comparison of the Absorption Spectra of different π - Oxy and π - Metoxyderivates of Diphenylamine
(Sravneniye spektrov pogloshcheniya razlichnykh π - oksi i π - metoksiproizvodnykh difenilamina).

PERIODICAL: Zhurnal Obshchey Khimii 1957, Vol. 27, Nr 12, pp. 3234-3241 (USSR)

ABSTRACT: In order to investigate the effect of the functional groups in the diphenylderivatives on the interaction of the compounds in concentrated sulphuric acid and the kind of kinetics and mechanism of the reaction, the curves of the absorption spectra of all oxy-, and metoxyderivatives substituted in the para position are compared to each other in the present work. The absorption spectra of the compounds with their curves are given on three diagrams: 1) Immediately after the beginning of dissolution in the acid. 2) after 5 - 12 days, and 3) after 19 - 33 days. In the case of continued action of concentrated

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Spectrophotometric Investigation of Diphenylamine and its Derivatives in Concentrated Sulphuric Acid. III. Comparison of the Absorption Spectra of different π - Oxy and π - Metoxyderivates of Diphenylamine.

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sulphuric acid on different oxy-, and metoxyderivatives of diphenylamine solutions of the same colour occur (see tables!) and homogeneous spectral curves are obtained. A considerable similarity of the absorption bands is observed which, however, show different intensity of the maximum absorption values. As to formation of salt diphenyl is the most active one, while in general its derivatives owing to the functional groups, are less inclined to it. The occurence of a second absorption band at 318 - 320 mμ in the spectrum of diphenylamine and its derivatives and also the formation of similar bands in the visible part, as well as the colour of the solutions indicate an equivalent chemical action of sulphuric acid on the compounds and an equal structure of the diphenylderivatives.
There are 3 figures, 3 tables, and 7 references, 4 of which are Slavic.

Card 2/3

Spectrophotometric Investigation of Diphenylamine and its Derivatives in Concentrated Sulphuric Acid. III. Comparison of the Absorption Spectra of different ~ - Oxy and π - Metoxyderivates of Diphenylamine. 79-12-14/43

ASSOCIATION: Khar'kov Polytechnical Institute (Khar'kovskiy politekhnicheskiy institut).

SUBMITTED: June 18, 1956

AVAILABLE: Library of Congress

1. Nitrodiphenylamines - Spectra
2. Nitrodiphenylamines - Chemical analysis
3. Spectrophotometers - Applications

Card 3/3

5(3)

AUTHORS: Bugay, P. M., Konel'skaya, V. N. SOV/153-2-1-9/25

TITLE: Absorption Spectra of 2-Nitro-diphenyl Amine and of Its N-Methyl-,N-Acetyl-, and N-Nitroso Derivatives (Spektry pogloshcheniya 2-nitro-difenilamina i yego N-metil-N-atsetil- i N-nitrozo-proizvodnykh)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 1, pp 46-50 (USSR)

ABSTRACT: The above-mentioned compounds were synthesized and investigated by the photometric method in order to study the problem of hydrogen bonds in the o-nitro-diphenyl amine derivatives, and the action of the functional groups introduced into the amino group of o-nitro-diphenyl amine. This article contains the spectrophotometric results obtained by investigating dioxane and ethanol with 2-nitro-di-phenyl amine, 2-nitro-N-acetyl diphenyl amine, 2-nitro-N-nitroso-diphenyl amine, and 2-nitro-N-methyl diphenyl amine. Figure 1 shows the absorption spectra of dioxane, and figure 2 that of ethanol. The table (on p 49, no Nr given) shows the spectra in dioxane and ethanol of 2-nitro-diphenyl amine as well as of its derivatives. It follows from a comparison between the curves of these spectra that 2-nitro-

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diphenyl amine contains a hydrogen bond between the amino- and the nitro group, while it is lacking in 2-nitro-methyl diphenyl amine. The difference between the spectrum curves indicates the change caused by splitting the hydrogen bond. By introducing a CH_3CO- and NO group into the amino group of 2-nitro-diphenyl amine the nature of the absorption spectra is abruptly changed and the groups mentioned paralyze to a certain extent the influence of the nitro group in ortho-position. There results a strongly competing effect of these substituents. All substances under investigation retain the same nature of the absorption spectra, both in dioxane and ethanol. Dioxane exhibits a somewhat higher absorptive intensity than ethanol. There are 2 figures, 1 table, and 7 references, 2 of which are Soviet.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut imeni V. I. Lenina; Kafedra obshchey i neorganicheskoy khimii (Khar'kov Polytechnic Institute imeni V. I. Lenin, Chair of General and Inorganic Chemistry)

Absorption Spectra of 2-Nitro-diphenyl Amine and of Its N-Methyl-, N-Acetyl-, and N-Nitroso Derivatives SOV/153-2-1-9/25

SUBMITTED: December 23, 1957

Card 3/3

BUGAY, P.M.; BYKOV, P.M.; BOGINSKIY, R.M.

Granite as raw materials for manufacturing porcelain for electrical engineering purposes. Stek. i ker. 17 no.10:30-32 '60.(MIRA 13:10)
(Granite) (Electric insulators and insulation)

LUTSKIY, A.Ye.; KONEL'SKAYA, V.N.; BUGAY, P.M.

Electron spectra of nitrosamines of the aromatic series.
Zhur. ob. khim. 30 no.11:3789-3795 N'60. (MIRA 13:11)

1. Khar'kovskiy politekhnicheskiy institut.
(Amines--Spectra)

S/076/60/034/012/021/027
B020/B067

AUTHOR: Bugay, P. M.

TITLE: Effect of Various Solvents on the Character of the Absorption Spectra of Diphenylamine and Some of Its Derivatives

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 12, pp. 2825-2833

TEXT: The absorption spectra of diphenylamine, 4-hydroxyphenylamine and 4-methoxydiphenylamine were studied in neutral (Refs. 1-4), acid (Refs. 5,6), and alkaline solvents. The results obtained are given in Figs. 1-6 and in Table 1. Diphenylamine and 4-methoxydiphenylamine are capable of forming salts of the ammonium type with concentrated sulfuric and phosphoric acid, whereas such salts are formed only in small quantities in glacial acetic acid. 4-Hydroxydiphenylamine in sulfuric and acetic acid forms almost no salts of the given type (Figs. 1, 3 and 5). The curves 3 of the adsorption spectra which are shown in Figs. 1 and 5 are characteristic of the absorption spectra of ammonium salts. These curves are strongly shifted toward the region of the short waves. Their

Card 1/3

absorption intensity is strongly reduced. In 4-hydroxydiphenylamine such a phenomenon was not observed (Fig. 3). In the standard, sodium alcoholate does almost not react with diphenylamine and its methoxy derivative, whereas it forms a phenolate and a quinoid derivative with 4-hydroxydiphenylamine which is also confirmed by the absorption spectra (Figs. 1, 3,5 and data in Table 1). After longer storing on air (20 to 60 days) the sulfuric, acetic, and phosphoric acid solutions of diphenylamine-, 4-hydroxydiphenylamine-, and 4-methoxydiphenylamine give colored solutions whose absorption spectra appear not only in the ultraviolet but also in the visible region. To study the oxidation process and the part played by atmospheric oxygen in the oxidation reactions the authors studied the absorption spectra of the solutions of some diphenylamine derivatives in concentrated sulfuric acid and glacial acetic acid which had been kept in nitrogen atmosphere for considerable time. Figs. 7 and 8 show the curves of the absorption spectra while Tables 2 and 3 give the data on the maxima of the absorption bands of diphenylamine and its derivatives in the acids mentioned and under the given conditions. Fig. 7 shows that in concentrated H_2SO_4, on storing the solutions for 67 to 250 days, an oxidation takes

Effect of Various Solvents on the Character of the Absorption Spectra of Diphenylamine and Some of Its Derivatives

S/076/60/034/012/021/027
B020/B067

place with sulfuric acid as oxidant. The curves of the absorption spectra of diphenylbenzidine and diphenylamine in concentrated H_2SO_4 under various conditions are given in Fig. 9. The spectrographic studies were made with the СФ-4(SF-4) spectrophotometer. The present paper is part of the lecture delivered at the VIII Mendeleyevskiy s"yezd (VIII Mendeleyev Congress). There are 9 figures, 3 tables, and 9 references: 6 Soviet, 1 Japanese, and 2 German.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut im. V. I. Lenina (Khar'kov Polytechnic Institut imeni V. I. Lenin)

SUBMITTED: April 25, 1959

Card 3/3

BUGAY, P.M.

Effect of various solvents on absorption spectra of triphenylamine and its derivatives. Izv.vys.ucheb.zav.;khim.i khim.tekh. 4 no.3:416-422 '61. (MIRA 14:10)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina, kafedra obshchey i neorganicheskoy khimii.
(Triphenylamine--Spectra)

BUGAY, P.M.; FILIPPOVA, Ye.I.; GOL'BERKOVA, A.S. (Khar'kov)

Correlation between absorption spectra and pH of diphenylamine and some of its derivatives in ethanol solution. Zhur. fiz. khim. 35 no. 4:825-827 Ap '61. (MIRA 14:5)

1. Khar'kovskiy politekhnicheskiy institut im. V.I. Lenina.
(Diphenylamine--Spectra) (Hydrogen-ion concentration)

BUGAY, P.M.; GOL'BERKOVA, A.S.; BAZHENOVA, L.M.

Effect of solvents on the absorption spectra of some amino- and quione derivatives of diphenylamine. Zhur.fiz.khim. 35 no.8:1731-1737 Ag '61. (MIRA 14:8)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina.
(Diphenylamine--Spectra)

BUGAY, P. M.; KONEL'SKAYA, V. N.; GOL'BERKOVA, A. S.

Electron spectra and the nature of the absorption bands of aromatic amine derivatives. Part 4: Electron spectra and the nature of the absorption bands of acetyl derivatives, N-hydroxy-, and N-nitroso derivatives of diphenylamine. Zhur. fiz. khim. 36 no.12:2754-2757 D '62. (MIRA 16:1)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina.

(Diphenylamine—Spectra)

S/076/63/037/002/011/018
B101/B186

AUTHORS: Bugay, P. M., Bazhenova, L. M., Gol'berkova, A. S., Konel'skaya, V. N., Naydenova, I. I. (Khar'kov)

TITLE: Electron spectra and nature of the absorption bands of aromatic amine derivatives. II. Electron spectra of diphenyl amine and its hydroxy and methoxy derivatives

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 2, 1963, 378-386

TEXT: Based on the classification of absorption bands of diphenyl amine derivatives published in Zh. fiz. khimii, 36, 1562, 1962, the bands of the following compounds are discussed in detail: $C_6H_5NHC_6H_4X$, where X = o-, m-, or p-OH; o-, m-, or p-CH_3O, and $XC_6H_4NHC_6H_4Y$, where X = o-, m-, or p-OH; X = o-, m-, or p-OH, Y = o-, m-, or p-CH_3O; X = Y = o-, m- or p-CH_3O. The solutions used were: hexane, ethanol, 98% H_2SO_4, glacial acetic acid, or ethanol + 2 M sodium alcoholate. The data for λ, log ε, factor strength, electron transfer energy and band width are tabl

Electron spectra and nature ...

In all substances, the fundamental band was the $A_{1g} \rightarrow B_{2u}$ benzene band which has high absorption and oscillator strength and appears between λ = 254 and λ = 300 mμ. Besides this, the A band (λ = 283-417 mμ) and the short-wave aniline band B (λ = 220-248 mμ) were observed, but not in all solvents. The long-wave D band (λ = 335-890 mμ) is observed in almost all dihydroxy, hydroxy-methoxy and dimethoxy derivatives of diphenyl amine. In the presence of two or three functional groups with equal electron-directing properties (OH, OCH_3, NH) one of the groups, when subjected to the effect of NH as a stronger electron donor acquires, the properties of a weak electron acceptor; this causes the appearance of the A band characteristic of functional groups with opposite sign. Also the dipole moment increases which was 1.95 D for p-hydroxy diphenyl amine, 1.79 D for 4-methoxy diphenyl amine, and 3.5 D for 4,4'-dihydroxy diphenyl amine. On formation of salts, the B band disappears or becomes weaker, when the salt formation is incomplete. In such cases, the oscillator strength decreases and a hypsochromic shift of the $A_{1g} \rightarrow B_{2u}$ band is observed. There are 2 tables.

Card 2/3

Electron spectra and nature ... S/076/63/037/002/011/018
B101/B186

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut im. V. I. Lenina (Khar'kov Polytechnic Institute imeni V. I. Lenin)

SUBMITTED: November 22, 1961

Card 3/3

LUTSKIY, A.Ye.; KOCHERGINA, L.A.; BUGAY, P.M.

Dipole moments of some substituted diphenylamines. Zhur.ob.khim. 33 no.3:985-987 Mr '63. (MIRA 16:3)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina. (Diphenylamine—Dipole moments)

LUTSKIY, A.Ye.; GOL'BERKOVA, A.S.; BUGAY, P.M.

Absorption spectra of disubstituted benzenes with similarly oriented functional groups. Part 5: Amino- and acetamido-substituted phenol and anisole. Zhur. ob. khim. 33 no.5: 1624-1632 My '63. (MIRA 16:6)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina.
(Phenol—Absorption spectra)
(Anisole—Absorption spectra)

BUGAY, P.M.; BAZHENOVA, L.M.; GOL'BERKOVA, A.S.; KONEL'SKAYA, V.N.; NAYDERNOVA, I.I.

Electron spectra and the nature of the absorption bands of aromatic amine derivatives. Part 2: Electron spectra of diphenylamine and its hydroxy- and methoxy derivatives. Zhur.fiz.khim. 37 no.2:378-386 F '63. (MIRA 16:5)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina.
(Diphenylamine—Absorption spectra)

S/076/63/037/003/012/020
B101/B215

AUTHORS: Bugay, P. M., Konel'skaya, V. N., Bazhenova, L. M., Col'berkova, A. S., Naydenova, I. I.

TITLE: Effect of the type of aromatic amines (primary, secondary, tertiary) and their o-derivatives, m-derivatives, and p-derivatives on the absorption spectra

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 3, 1963, 652-655

TEXT: This is a comparison of the widths and intensities of the 288 mμ benzene absorption bands in the spectra of aniline, diphenyl amine (DPA), triphenyl amine, o-aminophenol, 2-hydroxy-DPA, 2,2'-dihydroxy-DPA, 2-hydroxy-2'-methoxy-DPA, m-aminophenol, 3-hydroxy-DPA, 3,3'-dihydroxy-DPA, 3-hydroxy-3'-methoxy-DPA, p-aminophenol, 4-hydroxy-DPA, 4,4'-hydroxy-DPA, and 4-hydroxy-4'-methoxy-DPA dissolved in ethanol, hexane, 98% H_2SO_4, 100% CH_3COOH, and ethanol + 2 M alcoholate. Results: (1) The amino group is conjugated with all benzene rings, although to different degrees in the different compounds. The greatest increase in intensity of the band

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Effect of the type of aromatic ...

occurs on transition from aniline to DPA. (2) The chemical activity of the compound and salt formation in H_2SO_4 and CH_3COOH can be determined from the band intensity. (3) Increase in intensity of maximum absorption on transition from aminophenol to monohydroxy-DPA and decrease in intensity on transition to dihydroxy-DPA confirm that the amino group of DPA is conjugated with both benzene rings and that the conjugation is affected by the functional groups in o, m, or p positions. (4) In the ortho-hydroxy derivatives of aniline and DPA there exists an intramolecular hydrogen bond. (5) The band intensity decreases on salt formation. (6) Intensive changes showing no regular relation to the band intensity occur during the formation of quinoidal compounds and oxidation. There are 3 tables.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut im. V. I. Lenina (Khar'kov Polytechnic Institute imeni V. I. Lenin)

SUBMITTED: March 19, 1962

BUGAY, P. M.; KONEL'SKAYA, V. N.; GOL'BERKOVA, A. S.; BAZHENOVA, L. M.; and NAYDENOVA, I.

"Issledovaniye metodom elektronnykh spektrov kinetiki okisleniya orto oksi-i metoksi-proizvodnykh difenil-amina v 98% H_2SO_4 vo vremeni i ustanovleniye prirody polos pogloshcheniya."

report submitted for the VIIth European Congress on Molecular Spectroscopy, Budapest, 22-27 Jul 1963.

BUGAY, P. M.; KONEL'SKAYA, V. N.; BAZHENOVA, L. M.; GOL'BERKOVA, A. S.; NAYDENOVA, I. I.

Effect of the type of aromatic amines (primary, secondary, and tertiary) and their o, m, and p derivatives on the absorption spectra. Zhur. fiz. khim. 37 no. 3:652-655 Mr '63. (MIRA 17:5)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina.

BUGAY, P.M.; GOL'BERKOVA, A.S.; KONEL'SKAYA, V.N.; NAYDENOVA, I.I.

Absorption spectra and nature of absorption bands of aromatic amine derivatives oxidized in 98% sulfuric acid. Part 1. Zhur.fiz.khim. 37 no.10:2339-2343 O '63. (MIRA 17:2)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina.

BUGAY, P.M.; KONEL'SKAYA, V.N.; GOL'BERKOVA, A.S.; BAZHENOVA, L.M.

Electronic spectra and the nature of absorption bands of aromatic amine derivatives. Part 3. Zhur.fiz.khim. 36 no.10:2233-2235 O '62. (MIRA 17:4)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina.

BUGAY, P.M.; GOL'BERKOVA, A.S.; NAYDENOVA, I.I.

Absorption spectra and the nature of absorption bands of aromatic amine derivatives oxidized in 98% H_2SO_4. Zhur. fiz. khim. 37 no.11:2563-2566 N'63. (MIRA 17:2)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina.

L 40995-66 EWT(1) IJP(c) WW/GG

ACC NR: AP6020205 SOURCE CODE: UR/0056/66/050/006/1510/1518

AUTHORS: Bugay, A. A.; Levkovskiy, P. T.; Maksimenko, V. M.; Pashkovskiy, M. V.; Roytsin, A. B.

ORG: Institute of Semiconductors, Academy of Sciences, Ukrainian SSR (Institut poluprovodnikov Akademii nauk Ukrainskoy SSR)

TITLE: Splitting of EPR lines of Cr^{3+} in $ZnWO_4$ by an external electric field

SOURCE: Zh eksper i teor fiz, v. 50, no. 6, 1966, 1510-1518

TOPIC TAGS: electric field, line splitting, Hamiltonian spin, ~~EPR~~ electron paramagnetic resonance

ABSTRACT: Splitting of EPR lines of Cr^{3+} in $ZnWO_4$ by an external electric field has been detected. An investigation has been made of the angular dependence of splitting (dependence of splitting value on orientation of external magnetic and electric fields with respect to crystallorgraphic axes). A Hamiltonian spin is set up describing the interaction between the system and the external electric field. Corrections to the transition frequencies have been found. The theoretical results satisfactorily describe the experimental angular dependences of the splitting. The corresponding Hamiltonian spin constants have

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L 40995-66

ACC NR: AP6020205

been determined. A correlation effect between the angular splitting dependence and angular dependence of the EPR half-width line has been detected for the first time in the absence of an external electric field. A qualitative interpretation of the phenomenon has been described. The authors thank M. F. Deygen and V. B. Steynshleyger for their constant interest in thus work, V. A. Atsarkin for discussion of individual problems, and L. I. Datsenko for assistance in measurements. Orig. art. has: 6 figures, 9 formulas, ~~and 2 tables.~~ [Based on authors' abstract] [NT]

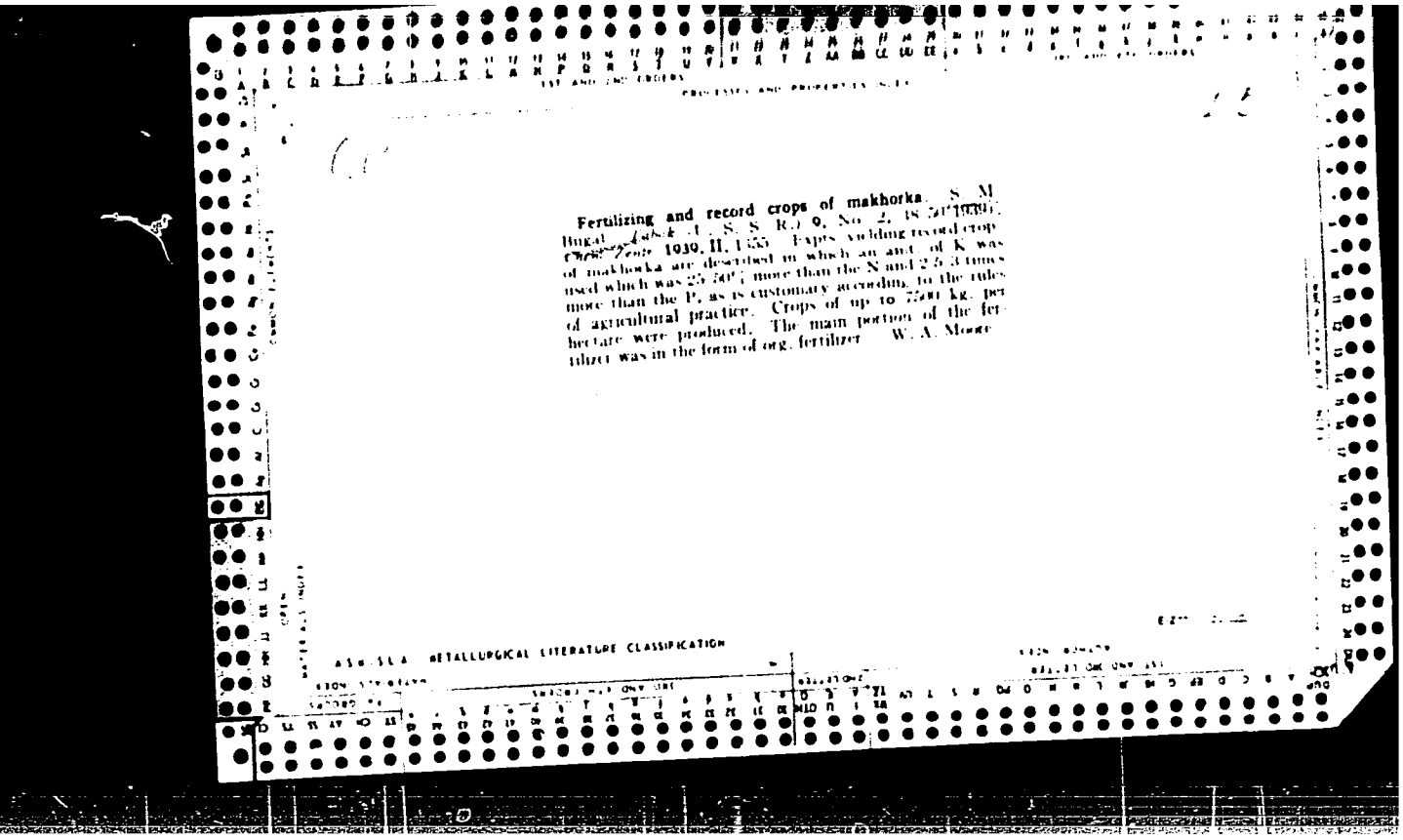
SUB CODE: 20/ SUBM DATE: 24Jan66/ ORIG REF: 007/ OTH REF: 008

Card 2/2 11b

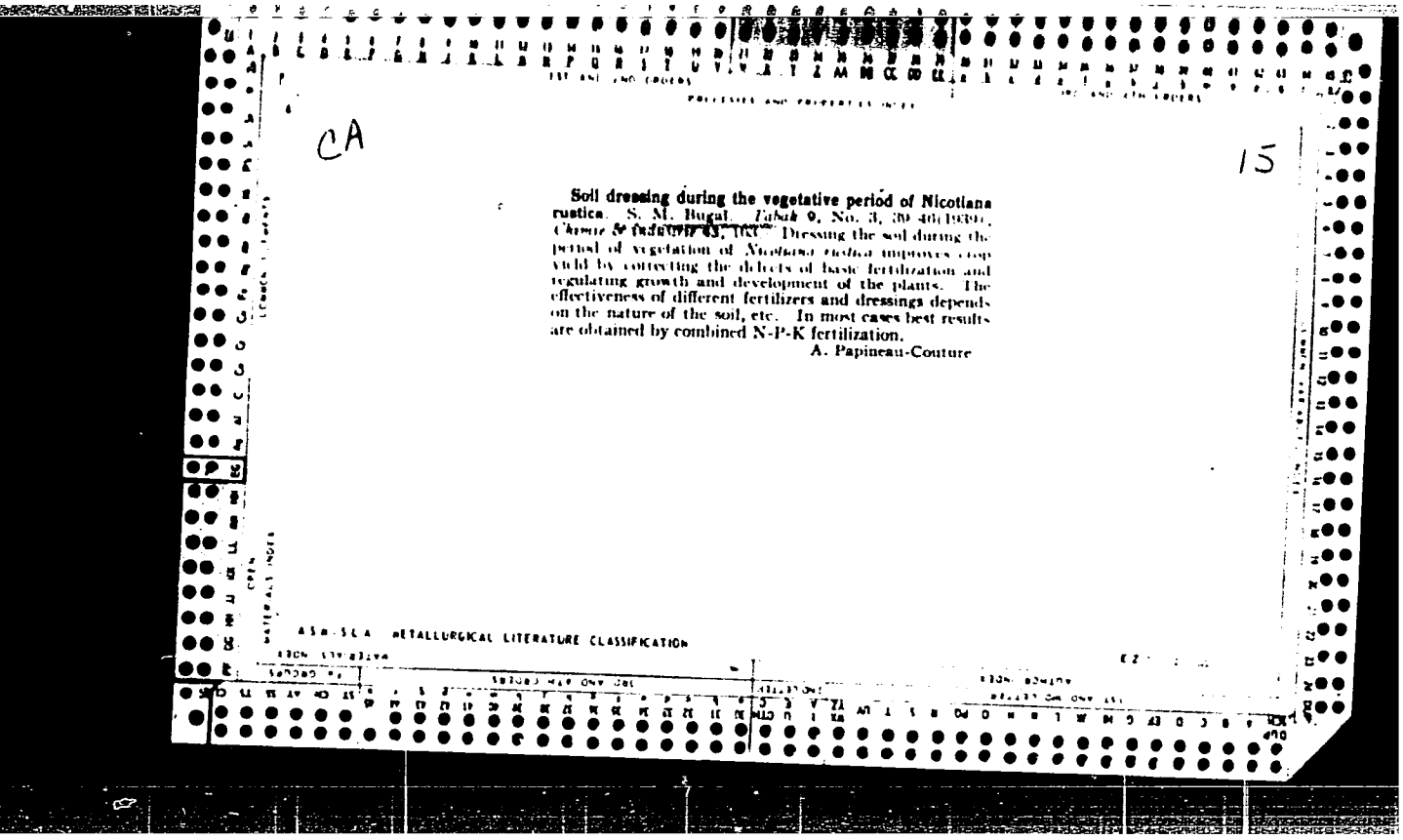
BUGAY, P.T.[Buhai, P.T.]; VIDUYEV, M.G.[Viduiev, M.H.], prof., doktor tekhn. nauk, retsenzent; YEVSEYEV, S.V.[IEvsieiev, S.V.] doktor tekhn. nauk, retsenzent; GOLDIREV, B.V.[Holdiriev, B.V.], dots., kand. tekhn. nauk, retsenzent; LISICHANSKIY,O.S. [Lysychanskyi,O.S.],kand.tekhn.nauk,otv.red.;POLUBICHKO,B.V.,red.;SARANYUK, T.V.,tekhnred.

[Theory of errors and the method of least squares]Teoriia pomylok i sposib naimenshykh kvadrativ. L'viv, Vyd-vo L'vivs'koho univ. Pt.1. 1960. 366 p. (MIRA 15:11)

(Least squares) (Geodesy)



Fertilizing and record crops of makhorka. S. M. Bukal. [illegible] U. S. S. R.] 9, No. 2, 18-20 (1939). Chem. Zentr. 1939, II, 1455. Expts. yielding record crops of makhorka are described in which an amt. of K was used which was 25-50% more than the N and 2.5-3 times more than the P, as is customary according to the rules of agricultural practice. Crops of up to 2500 kg. per hectare were produced. The main portion of the fertilizer was in the form of org. fertilizer. W. A. Mooze



CA

15

Soil dressing during the vegetative period of Nicotiana rustica. S. M. Bugal. *Tabak* 9, No. 3, 30-40(1939); *Chimie & Industrie* 43, 1051. Dressing the soil during the period of vegetation of *Nicotiana rustica* improves crop yield by correcting the defects of basic fertilization and regulating growth and development of the plants. The effectiveness of different fertilizers and dressings depends on the nature of the soil, etc. In most cases best results are obtained by combined N-P-K fertilization.

A. Papineau-Couture

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BUGAY, S. I.

"On the Treatment of Makhorka Plants Affected by Virus," Doklady Vsesoiuznoi Akademii Sel'skokhoziaistvennykh Nauk imeni V. I. Lenina, vol. 6, no. 9, 1941, pp. 11-15. 20 Akl.

SO: SIRA, SI 90-53, 15 December 1953

1. BUGAY, S. M.

2. USSR (600)

4. Kok-Saghyz

7. Season for sowing kok-saghyz. Trudy Undisoz, No. 6, 1951.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Uncl.

BUGAY, S.

Summer sowing of kok-saghz. Kolkh proiz. 12, No 6, 1952.

[redacted]

IVOAV, S. V.

Tobacco - Diseases and Pests

Control of the leaf spot in Makhorka. Tabak 14, No. 1, [illegible].

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

BUGAY, Samson Mitrofanovich

BUGAY, Samson Mitrofanovich-Academic degree of Doctor of Biological Sciences, based on his defense, 19 April 1954, in the Council of the Kiev State U imeni Shevchenko, of his dissertation entitled: "Biological Peculiarities of Kok-Sagyz and Ways to Increase its Productivity." for the Academic Degree of Doctor of Sciences

SO: Byulleten' Ministerstva Vysshego Obrazovaniya SSSR, List No. 3, 4 February 1956 Decisions of the Higher Certification Commission Concerning Academic Degrees and Titles.

JPRS/NY 554

BUGAY, S.M.

Brief sketch on the development of tobacco growing in the Ukraine. Nauk.zap.Kiev.un. 13 no.6:55-63 '54. (MLRA 9:10)

(Ukraine--Tobacco--History)

CATEGORY : Cultivated Plants. Industrial. Oleiferous. Sugar.

ABS. JOUR. : RZhBiol., No. 3, 1959, No. 11073

AUTHOR : Bugay, S. M., Degtyareva, K. I.

INST. : Uman Agricultural Institute.

TITLE : Growing "Makhorka" (Nicotiana rustica) by the Square-Hill Method.

ORIG. PUB. : Tabak, 1958, No. 1, 51-53

ABSTRACT : Data of Uman Agricultural Institute experiments (1954-1956) in the study of the growth and development characteristics of "makhorka" (Nicotiana rustica) with different methods of spacing the plants. With the hill and drill placement of "makhorka" (Nicotiana rustica), the yield is in direct proportion to the density of the plant stand. With equal density of the stand (55.5 thousand on 1 hectare), the growth and development of "makhorka" are completely identical in the case of the drill and square-hill placement at the rate of 2 plants on a hill. Under

CARD: 1/2

COUNTRY :
CATEGORY :

ABS. JOUR. : RZhBiol., No. 1959, No. 11073

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : these conditions, the yield and the quality of the raw material are also the same. The variants of the square-hill placement of "makhorka" according to the layouts 73 x 73 x 3 and 35 x 35 x 4 produce a lower yield. -- -- B. L. Klyachko-Gurvich

CARD: 2/2

BUGAY, S.M. [Buhai, S.M.]; SOBCHUK, V.V.

Determination of the surface area of corn leaves. Ukr.bot.zhur. 16 no.5:69-72 '59. (MIRa 13:4)

1. Umanskiy sel'skokhozyaystvennyy institut.
(Leaves)

DZYUBA, Nikolay Yevtikhiyevich [Dziuba, M.IE.], agronom; BUGAY, S.M. [Bukhai, S.M.], doktor sel'skokhoz.nauk, otv.red.; SHVETS', S.I., red.

[Seed production on collective and state farms] Nasinnytstvo u kolhospakh i radhospakh. Kyiv, 1960. 39 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.6, no.15). (MIRA 13:10)

(Seed production)

TOMASHEVSKIY, Dmitriy Filippovich, kand. sel'khoz. nauk; BUGAY, S.M., doktor biol. nauk, prof., red.; KIREYEV, F.N., red.; POTOTSKAYA, L.A, tekhn. red.

[Cultivation practices in growing corn in the forest-steppe of the Ukraine] Agrotekhnika vyrashchivaniia kukuruzy v Lesostepi USSR. Pod red. S.M. Bugaia. Kiev, Izd-vo Ukrainskoi Akad. sel'khoz.nauk, 1962. 113 p. (MIRA 16:5)
(Ukraine--Corn (Maize))

BUGAY, S.M. [Buhai, S.M.], doktor biol. nauk, red.; OZERANSKIY, L.A. [Ozerans'kyi, L.A.], red.; NEMCHENKO, I.Yu., tekhn. red.

[Let us increase the production of peas and forage beans] Zbil'shymo vyrobnytstvo horokhu ta kormovykh bobiv. Kyiv, Derzhsil'hospvydav URSR, 1962. 81 p. (MIRA 16:6)
(Ukraine--Peas) (Ukraine--Beans)

BUGAY, Samson Mitrofanovich, doktor biol. nauk, prof.; PAVLENKO, M.K., red.; MANZHERAN, P.F., tekhn. red.

[Plant growing] Rastenievodstvo. Kiev, Gossel'khozizdat USSR, 1963. 517 p. (MIRA 17:4)

L 27709-66

ACC NR: AP6004214 (A) SOURCE CODE: UR/0331/65/000/010/0021/0021

AUTHOR: Bugay, V.; Solov'yev, V.

ORG: Dal'NIIIKh

TITLE: Fire tank tractor

SOURCE: Lesnaya promyshlennost', no. 10, 1965, 21

TOPIC TAGS: fire fighting equipment, safety engineering

ABSTRACT: A fire-fighting vehicle comprised of a water tank mounted on tractors of the TDT-60 or TDT-75 hauling type was described. The tank was designed by the Mechanization Department of Dal'NIILKh and built by the Komsomol'skles repair shop. The 5 cu m tank was made of steel and was provided with a priming cup and a manhole. Its net weight was 1850 kg. The auxiliary equipment consisted of a 200-m hose, a motor-pump of MP-800 or MP-600 type, a motor-saw, portable sprayers, shovels, axes and other devices. The fire tank tractor was used for fighting forest fires. Its speed was approximately 3 km/hr with filled tank and about 7 km/hr with an empty tank. The use of the fire fighting tractor was explained and illustrated. It was proposed to put several dozen of these tanks into operation in 1965. Orig. art. has: 1 photo.

SUB CODE: 13 / SUBM DATE: None / ORIG REF: 000 / OTH REF: 000

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TIKHENKO, L.G., gornyy inzh.; STEL'MAKH, N.N., gornyy tekhnik; GUMENOK, G. Ye., gornyy tekhnik; VOLOSHIN, A.M., gornyy inzh.; BEREZOVSKIY, A.P., gornyy inzh.; LYUTYY A.L., gornyy inzh.; BUGAY, V.A., gornyy tekhnik-marksheyder

"Improving underground work" by IA. D. Grossman and E. M. Kozakov. Reviewed by L. G. Tikhenko and others. Gor. zhur. no.3:3-7 Mr '61. (MIRA 14:3)

1. Rudoupravleniye im. Rozy Lyuksemburg, Krivoy Rog (for Tikhenko, Stel'makh, Gumenok). 2. Shakhta "Kommunar-Probeda", Krivoy Rog (for Voloshin, Berezovskiy, Lyutyy). 3. Shakhta "Novaya" rudoupravleniy im. Rozy Lyuksemburg (for Bugay).
(Mining industry and finance)
(Grossman, IA. D.) (Kozakov, E. M.)

L 33536-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b)/EWP(l)/EWA(c) MJW/JD/MW

ACCESSION NR: AP5006989 S/0198/65/001/001/0052/0061

AUTHORS: Pisarenko, G. S. (Kiev); Troshchenko, V. T. (Kiev); Bugay, V. I. (Kiev)

TITLE: Effect of cyclic plastic deformation on metal fatigue under conditions of homogeneous and nonhomogeneous stress states

SOURCE: Prikladnaya mekhanika, v. 1, no. 1, 1965, 52-61

TOPIC TAGS: plastic deformation, fatigue strength, steel, copper, tensile strength, compression strength, shear strength/ 20Kh steel, 25 steel, 45 steel, 1Kh18N9T steel, 1Kh18N10T steel, EI726 steel, TsDM PU 10 hydraulic machine

ABSTRACT: Experimental results were obtained characterizing the plastic deformation flows in a series of steels and copper under repeatedly varying load conditions both homogeneous (tension-compression) and nonhomogeneous (shear). The types of steels used were: low carbon steels 20Kh and 25, medium carbon steel 45, and high-temperature austenitic steels 1Kh18N9T, 1Kh18N10T, and EI726. For symmetric tension-compression tests a hydraulic machine type TsDM-PU-10 was used and for symmetric bending--a resonance fatigue machine. The results were obtained on oscillographs in the form of hysteresis loops. The results of these tests show that the ratio of fatigue strength to a characteristic static strength in tension in metals does not

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ACCESSION NR: AP5006989

remain constant. The cyclic deformation curves in these metals differ considerably from the static deformation diagrams. A good correlation was found between the fatigue strength in bending and tension-compression and the cyclic proportionality limit σ_{pp}. The ratio σ_{-1}/σ_{pp} varied between limits 0.8-1.0. Finally, there was a monotonic increase in plastic deformation per cycle as a function of the stress. Orig. art. has: 7 figures, 3 tables, and 1 formula.

ASSOCIATION: Institut problem materialovedeniya AN UkrSSR (Institute of Problems in the Science of Materials, AN UkrSSR)

SUBMITTED: 06Oct64 ENCL: 00 SUB CODE: MM,ME

NO REF SOV: 005 OTHER: 004

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PISARENKO, G.S. [Pysarenko, H.S.], akademik; TROSHCHENKO, V.T.; BUGAY, V.I. [Buhai, V.I.]

Correlation between the values of the fatigue limit and the strength characteristics of metals. Dop. AN URSR no.2:187-190 '65. (MIRA 18:2)

1. Institut problem materialovedeniya AN UkrSSR.
2. AN UkrSSR (for Pisarenko).

L 57836-65 EWT(m)/EWP(w)/EWA(d)/EWP(t)/EWP(k)/EWP(b)/EWA(c) Pf-4 JD/HW/EM/RM
ACCESSION NR: AP5018878 UR/0304/64/000/006/0066/0067

AUTHOR: Bugay, V. I.(Engineer)

TITLE: Universal device for measuring elastic and plastic deformation

SOURCE: Mashinostroyeniye, no. 6, 1964, 66-67

TOPIC TAGS: laboratory instrument, metal deformation, high temperature phenomenon

ABSTRACT: The Institute of Materials of the Ukrainian Academy of Sciences has developed a testing device which is particularly effective in the presence of high temperatures. With this device one may determine limits of proportionality in a sample, and also small plastic deformations, with the same degree of accuracy possible with glueing sensors to samples. Tests may be run either at room or at high temperatures, with simple static stretching or with increasing amplitude of a harmonically varying load.

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ACCESSION NR: AP5018878

The sample is turned between two mandrels to which are attached rigid cross brackets joined by rods and resilient plates. The outer terminals of the mandrels are attached to a tensile testing machine. As loads resulting from deformation of the sample are applied, the distance between the brackets varies, and this results in deflection of the pre-adjusted rods, or of the attached plates, to which strain gauges have been glued.

In the case of high-temperature tests, temperature change rates of the order of 0.5°/min prevent satisfactory determination of limits of proportionality and the modulus of elasticity. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: IE, MM

NR REF SOV: 000 OTHER: 000 JPRS

JD

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L 32676-65 EWT(d)/EWP(e)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/EPR/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l) Pc-4 MJW/JD/RM

ACCESSION NR: AP5004441 S/0221/65/000/001/0071/0073

AUTHOR: Bugay, V.I.

TITLE: New method of determining strains in cast and sintered materials

SOURCE: Poroshkovaya metallurgiya, no. 1, 1965, 71-73

TOPIC TAGS: powder metallurgy, sintered alloy, cast alloy, stress strain diagram, resistance gauge/steel 25

ABSTRACT: The article describes a universal device which makes it possible to investigate with great accuracy the initial portions of the stress-strain diagrams of metals and alloys at room and high temperatures (up to 1000K) under static and cyclic loads. The device is based on the use of ohmic resistance gauges, and detailed sketches of its construction and circuitry are given. Initial portions of elongation diagrams obtained with steel 25 are shown as an example. The device described is recommended for use by materials testing laboratories in investigations of initial plastic strains in sintered materials at room and higher temperatures. Orig. art. has: 4 figures.

ASSOCIATION: Institut problem materialovedeniya AN UkrSSR (Materials Science Institute, AN UkrSSR)

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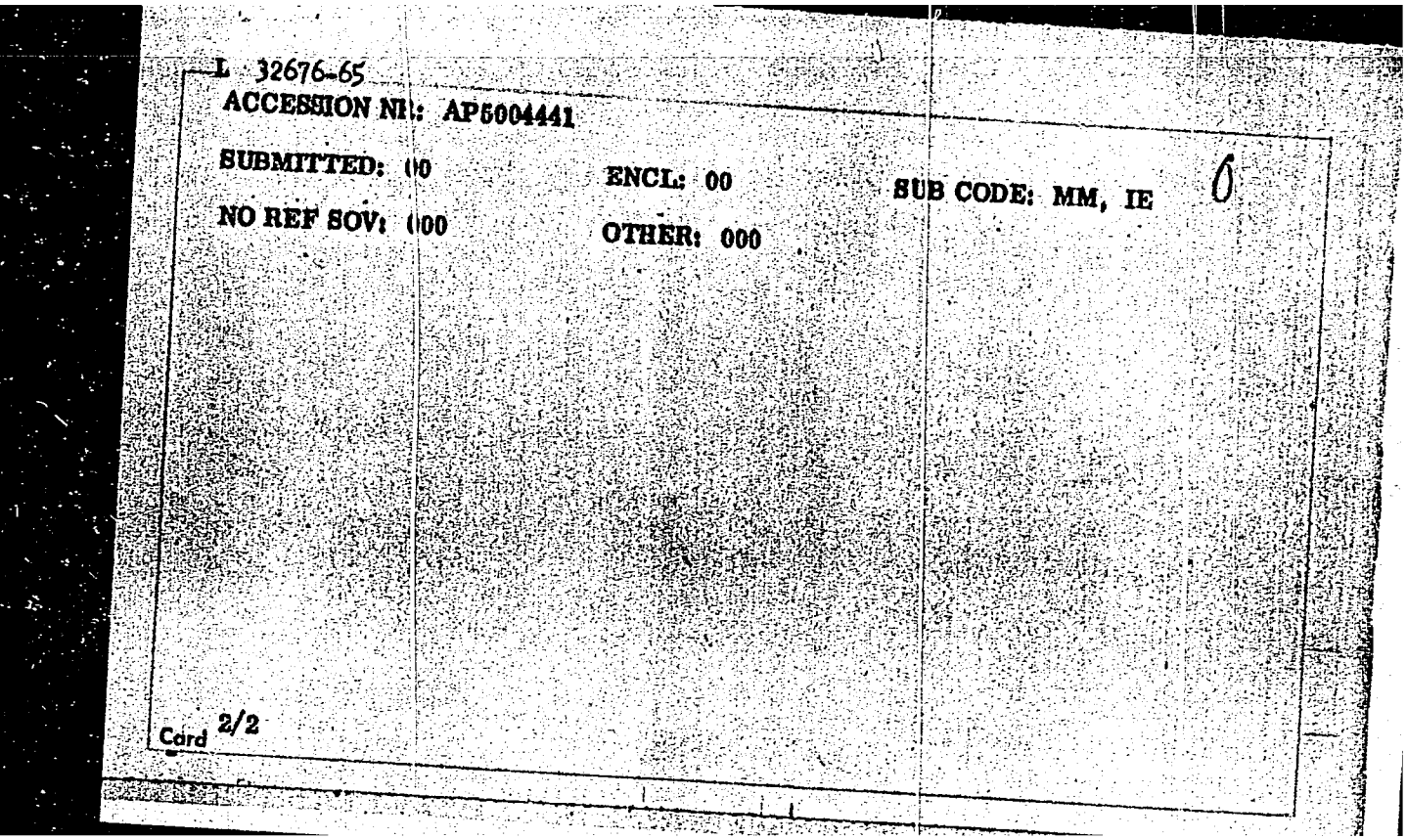

L 32676-65
ACCESSION NR: AP5004441

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, IE

NO REF SOV: 000 OTHER: 000

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